

5332

U. S. COAST & GEODETIC SURVEY
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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: California

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. 21 - 1932

LOCALITY

Southern California

San Nicolas Island.

1932

CHIEF OF PARTY

Robert W. Knox

U. S. GOVERNMENT PRINTING OFFICE: 1928

5332

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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REG. NO.

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5332

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 21

REGISTER NO. **5332**

State California

General locality San Nicolas Island

Locality Around San Nicolas Island

Scale 1:20,000 Date of survey July - Sept., 19 32

Vessel Chartered Launch " VIRGINIA I "

Chief of Party Robert W. Knox.

Surveyed by R. W. K.

Protracted by J. C. Mathis & C. E. Rasmussen

Soundings penciled by D. L. Ackland

Soundings in fathoms ~~feet~~

Plane of reference MLLW.

Subdivision of wire dragged areas by _____

Inked by Paul H. Scherr

Verified by Paul H. Scherr

Instructions dated April 14, 19 32

Remarks: _____

DESCRIPTIVE REPORT

to accompany

SHEET (field) NO. 21.

San Nicolas Island,

Scale 1:20,000

1932

INSTRUCTIONS:

The authority for the execution of this survey was contained in the Directors Instructions dated April 14, 1932.

SURVEY METHODS:

The chartered launch "VIRGINIA I" was used to make this survey by standard Coast Survey methods. Because of the very unsatisfactory condition of the compass on the launch, the lines were run normal to the beach, using ranges where possible. The system of spacing sounding lines was as follows:

Under 30 fathoms (on south side)	200 meters.
Under 20 " (on north side)	200 " .
30 fathoms to 50 fathoms (on south side)	$\frac{1}{4}$ mile.
20 " " 50 " (on north side)	$\frac{1}{4}$ " .
50 " " 100 "	$\frac{1}{2}$ " .

DISCREPANCIES:

There are no serious discrepancies on the sheet, although two undeveloped shoal soundings are noted. The first is a 4 $\frac{1}{6}$ fathom sounding between 65 and 66 e day at Lat. 33 - 16 plus 1020, Long. 119 -

29 plus 534 m. The other is a $3 \frac{4}{6}$ fathom sounding on 31 j day at Lat. 33 - 17 plus 490 m., Long. 119 - 32 plus 938 m. Both of these soundings are close inshore and in an area where the bottom is rocky.

DANGERS:

The dangers that exist on this sheet are such that a prudent mariner will have no difficulty in avoiding. The inshore area on the south side of the island from signal MER eastward to the sand spit and on the north side from the sand spit westward to signal HOW is free from

dangers. Around "Coney Island Point" (so called because a fishing boat of that name beached here) there is foul area terminating offshore with a sunken rock in Lat 33 - 16 plus ¹⁸⁰~~210~~ m. Long. 119 - 28 plus 1193 m. The least depth, on the rock, was not measured but from the character of the swell showing at the time of charting, it is probably covered about 5 feet at MLIW. The inshore dangers from Coney Island Point to the west end are few although the bottom is very uneven. Kelp extends offshore for an average of a mile through this area and the rocks and reefs break in ordinary weather.

The large reef, about $1 \frac{1}{2}$ mile west true from the western point of the island, is bare $3 \frac{1}{2}$ feet at MLIW. There are two sunken rocks offshore from this reef. They break in a moderate swell and the kelp extends well beyond them.

There is uneven bottom from signal LANDS END to signal MER and very foul just west of signal MER. Thick kelp extends $\frac{3}{4}$ miles offshore in this area.

Mention should be made of the large area of breakers off the sand spit on the east end of the island. The island lies in the

direction of the prevailing summer swells and tends to separate them for the length of the island. They unite again off the sand spit in a series of high breakers. It is believed that this tends to move sand from the west end of the island and build up the sand spit. This area is likely to show more shoaling in the future.

Two shoal areas were found on the sheet. A shoal, with a least depth of $11 \frac{2}{6}$ fathoms at MLLW, was found in Lat 33 - 18 plus 860 meters, Long. 119 - 27 plus 590 meters, position 19 f day. The area was developed thoroughly. The original survey of 1879 did not cover the area but it was charted in 1926 on Sheet Registry No. 4559 as 12 fathoms. The other shoal, a least depth of $7 \frac{1}{2}$ fathoms at MLLW, was found close to the edge of the kelp, southwest of the island, at Lat. 33 - 15 plus 1478 meters, Long. 119 - 37 plus 1255 meters, position 36 s' day. The shoal was missed by the original survey of 1879.

CHANNELS:

There is a deep channel for large vessels between the kelp, extending about $3 \frac{1}{2}$ mile off the western point of the island to 17 fathoms, and Beggs Rock.

ANCHORAGES:

The only anchorage on the sheet is on the south side of the sand spit on the east end of the island. Here small fishing craft anchor in from 4 to 5 fathoms hard sand at the inshore edge of the kelp, close under the island. Larger vessels anchor further offshore in from 12 to 14 fathoms, hard sand bottom. The anchorage is uncomfortable because the island offers very little lee from the prevailing swells. At times, when the NW breeze is blowing, holding is difficult.

COMPARISON WITH PREVIOUS SURVEYS:

The survey of 1879, Sheet Registry No. 1459, shows very little development and wide spacing of lines and for this reason a comparison is difficult. Generally the depths check good. The rocks and reefs off the west end of the island are out of place and different in character. The furthestest offlying rocks were moved about 300 meters west however the original survey shows an area of breakers directly to the north of this location. Other rocks charted in this locality by the original survey were not found. The east end of the island, being of a changable nature, shows a great change in the location of the sand spit.

An excellent check was made on the north side of the island with the survey of 1926, Sheet Registry No. 4559, but a junction could not be made on the south side. The discrepancies here reach almost 100 fathoms in some places and is undoubtedly due to lack of faulty control for the previous survey.

GEOGRAPHIC NAMES:

It is recommended that the name Corral Harbor be deleted from future charts. The small ^{ght}bite is rapidly filling in with sand and the landing here is no better than other places along the island. Little evidence of the inadvisability of a landing here stands at the head of the bite in the form of a whale bone marking the grave of a seaman who was drown trying to make a landing.

The point on which Triangulation Station CONEY is located is known locally as Coney Island Point. (See description of offlying dangers under DANGERS)

For other geographic name on this sheet see the Descriptive
Report for Topographic Sheet B - 1932.

7.4775

WEATHER:

For a matter of record, a note is inserted here about the weather during the period of the survey. During 44 field days between July 23 to Sept. 27, 1932, there were: 10 days of fog, 26 days overcast and hazy, 5 days partly cloudy and only three clear days; while a high NW breeze blew for 21 days, a light breeze from the NW for 19 days and calm for only four days.

PLOTTING:

About 25% of the position were protracted during September 1932 by commissioned personnel. Due to other field work in progress, the sheet was not completed until September 1933 by a civilian draftman. The depth curves were drawn and the sheet review after completion by commissioned personnel.

John C. Mathisson
John C. Mathisson,
Jr. H. & G. E.

Respectfully submitted:

Robert W. Knox

Approved
Robert W. Knox,
H. & G. E., Chief of Party.

STATISTICS

Sheet 21 - 1932

DAY	DATE	NO OF SDGS		STAT. MI. SDG. LINE		POSITIONS	VOL.
		H.L.	MACH.	H.L.	MACH.		
a	July 23	67	93	4.9	6.4	56	1
b	" 24	161	131	10.0	9.4	95	1
c	" 25	54	175	5.9	18.0	114	1
d	" 26	70	170	7.0	16.2	84	2
e	" 27	133	159	10.5	13.5	91	2
f	" 28	99	211	10.1	21.6	120	2
g	Aug. 4		40		4.8	24	3
h	" 5	23	36	1.4	3.0	25	3
j	" 7	193	118	11.1	11.7	89	3
k	" 8	176	140	16.1	13.3	109	3
l	" 9	128	133	26.4	4.9	84	3 & 4
m	" 10	131	180	10.0	17.5	125	4
n	" 11		57		5.1	34	4
p	" 16	38	85	3.0	10.7	63	4
q	" 17	49	126	4.6	14.0	93	4
r	" 18		97		11.4	44	5
s	" 20	32	64	3.0	6.0	49	5
t	" 21	68	137	8.0	17.0	110	5
u	" 22	102	156	8.0	15.7	120	5
v	" 23	304	74	14.5	8.5	123	5 & 6
w	" 24	245	101	15.0	6.5	111	6
x	" 25	156	70	12.0	5.8	88	6
y	" 30	56	142	6.5	14.0	102	6
z	" 31	40	140	3.0	15.0	94	7
a'	Sept. 1	94	156	6.0	14.2	104	7
b'	" 2	95	37	6.5	4.0	52	7
c'	" 3	51	83	5.0	9.0	68	7
d'	" 9	66	127	6.5	13.3	103	7 & 8
e'	" 10	149	234	13.5	16.0	172	8
f'	" 11		173		19.2	108	8
g'	" 12	13	107	0.5	8.5	78	8
h'	" 13	156	143	8.1	17.0	153	8 & 9
j'	" 14	30	172	3.0	18.6	125	9
k'	" 15	70	76	4.9	5.0	22	9
l'	" 20	155	59	9.0	3.6	100	9
m'	" 21		27		2.6	19	9
n'	" 22		5		0.2	2	9
p'	" 23		18		1.8	9	9
q'	" 24	20	13	1.0	1.0	18	9
r'	" 25	52	9	2.0	0.5	32	10
s'	" 26		69		6.9	40	10
t'	" 27		15		1.8	12	10

TOTALS

3276

4358

257.0

413.4

3264

LAC

December 13, 1933.

82
Johnston
Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 5332

Locality San Nicolas Island, Off Coast Southern California

Chief of Party: Robert W. Knox in 1932
Plane of reference is mean lower low water reading
1.3 ft. on tide staff at San Nicolas Island
12.1 ft. below B. M. 1

Height of mean higher high water above plane of reference is 4.9 feet

Condition of records satisfactory except as noted below:

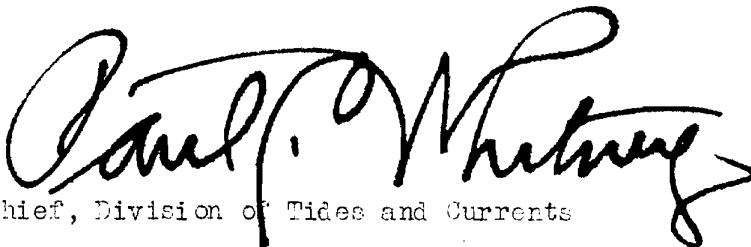

Chief, Division of Tides and Currents

Diagram No. _____

Date. _____

Under investigation. Q



Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *H. 5332*

The following statistics will be submitted with the
cartographer's report on the sheet:

Number of positions on sheet	<i>3264</i>
Number of positions checked	<i>56</i>
Number of positions revised	<i>4</i>
Number of soundings recorded	<i>7634</i>
Number of soundings revised	<i>131</i>
Number of signals erroneously plotted or transferred	<i>—</i>

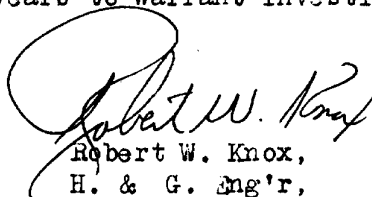
Date: *January 15, 1934*

Cartographer: *Paul H. Scherr*

APPROVAL OF CHIEF OF PARTY

Field sheet No. 21 and accompanying records have been inspected and approved by me. The field work was done under my direct supervision, the office plotting under occasional supervision.

No additional work is considered necessary at this time, although the character of the shore line and bottom in the vicinity of the sand spit on the east end of the island will probably change sufficiently within a period of five years to warrant investigation.


Robert W. Knox,
H. & G. Eng'r,
Chief of Party.

SECTION OF FIELD RECORDS

Report on H 5332

Chief of party - Robt. W. Knox

Protracted by E.E. Garnett

Verified and inked by P.H. Scherr

Surveyed in July- Sept. 1932.

Surveyed by Robt. W. Knox

Soundings plotted by D.L. Ackland

Topography inked by Field Party

1. - The Records conform generally to the requirements of the General Instructions. However a bottom characteristic of "Rk" is often given which is taken as "rky" in almost all cases. Mention is also made of the boat entering kelp without giving the outer limit of the kelp.
2. - The ten and twenty fathom curves are completely drawn; the other depth curves are incomplete.
3. - The field plotting was completed to the extent prescribed in the General Instructions.
4. - No part of the drafting done by the Field Party was changed. The low water line was inked by the verifier.
5. - A junction with H5304 was made which was satisfactory. The junction enabled the completion of the twenty foot depth curve to the east of the island.
- 6.- Remarks;
 - a. - Crossings are particularly excellent with hardly any discrepancies.
 - b. - Depths of eight fathoms, four feet, or nine fathoms, four feet were consistently plotted as $8\frac{1}{2}$ or $9\frac{1}{2}$ fathoms while the General Instructions clearly state in Paragraph 154 that they should be plotted as eight and three quarters and nine and three quarters.
 - c. Very small penciled circles were found at positions 91z, 95f, and others, of which no other notation but "RK" is found in the records.

- d. - On position 43 v (P. 68, Vol. 5) Lat. 33 15'.5; Long. 118 35'.4, a depth of seven fathoms is recorded with a least depth of nine and one quarter fathoms surrounding it. The recorder says that possibly the leadline caught in the kelp. This also happened on line 35-361 (P. 68, Vol. 3) Lat. 35 17'.3; Long. 118 34'.4, where eight and one quarter fathoms was recorded with a least depth of eleven fathoms surrounding it. These soundings were left unlinked pending review of the sheet. Plot as recorded. (Chief F.R. Sec.)
- e.- On position 83 b (Vol. 1 P. 34) the records note breakers 20 meters starboard while, on the other hand, the boat sheet and the smooth sheet indicate a sunken rock. A dotted line surrounding it was removed. Sunken rock correct. (See p. 2 Desc. Report)

7.- The Field drafting was of an excellent quality.

Respectfully submitted,

Paul Tcher

January 15, 1934.

SECTION OF FIELD RECORDS
Review of Hydrographic Sheet No. 5332.
San Nicolas Island, California.
Surveyed in 1932.
Machine and hand lead soundings.
Instructions dated April 14, 1932 (R. W. Knox).

Chief of party - R. W. Knox.
Surveyed by - R. W. Knox.
Protracted by - E. E. Garnett.
Soundings plotted by - D. L. Ackland.
Verified and inked by - P. H. Scherr.

1. The records conform to the requirements of the Hydrographic Manual except that the abbreviation "Rk" was used so frequently that it was evident it was intended to denote a rocky condition of the bottom and not an isolated rock. In most all cases it has been plotted on the sheet as "rky."

The limits of the heavy kelp growth on the west and north side of the island were noted in the records on some of the lines when "entering" and "leaving", but was not recorded on all lines.

2. The character and extent of the survey satisfy the specific instructions.

3. There are only a few crossings as most of the lines were run normal to the beach in order to use ranges where possible. The agreement of adjacent lines is generally excellent.

4. The information is sufficient for drawing the usual depth curves with the exception of those under ten fathoms, close inshore, which may be partially but not completely drawn.

5. The junction with the contemporary off shore sheet, H. 5304, is satisfactory.

6. Comparison with previous surveys.

The survey of 1879, H. 1459b, is the only previous survey which completely covers this area. The sounding lines on this sheet are widely spaced and there is very little development, making a comparison difficult. In general the depths check fairly well with the exception of some of the deeper depths off the south side of the island and in the very changeable area off the east end. The field party reports that the rocks and reefs off the west end of the island "are out of place and different in character" and that "other rocks charted in this locality by the original survey were not found." An examination of the records of H. 1459b shows that whenever the word "rocks" appeared in the record, quite a large number of sunken rock symbols were added to the sheet. It is recommended that H. 1459b be completely superseded, both as to the hydrography and the delineation of rocks and reefs, by the recent survey, H. 5332.

Off the north side of the island this work joins and slightly overlaps

the survey of 1926, H. 4559. While H. 4459 is plotted on a very small scale, the agreement is excellent.

Off the south side of the island this work overlaps the survey of 1924, 5, 6 and 8, H. 4447, and also one sounding line from the survey of 1926 and 8, H. 4550. Both of these sheets are plotted on a scale of 1-120,000 and their control is very approximate. The agreement here is poor and in view of the superior control of the new work, H. 5332, it is recommended that within its limits it should entirely supersede the previous surveys.

Off the east end of the island, the survey of 1925, H. 4448, is of adequate scale and fairly recent date but the area is highly changeable and the sheet, which depends on compass orientation, should also be superseded.


Some of the rocks, close in shore, which are shown on the previous topographic survey of 1879, T. 1523, but are not indicated on the new topographic sheet, T. 4775, have been added to this sheet in red.

A general statement may be made that this survey, H. 5332, should supersede all previous work within this area.


7. The survey as a whole is considered very good. There are several shoals on the north side of the island, approximately half a mile off shore, which were not developed. The 11 fathom shoal in Lat. 33°-18'.45, Long. 119°-27'.3 lies about three miles off the north side of the island. The least soundings obtained were 11 2/6 fathoms but these are not the result of drift soundings or feeling around with the lead and there is still a possibility that a shoaler depth may exist. It is recommended that this shoal be wire dragged when opportunity affords.

Reviewed by R. L. Johnston - January 20, 1934.


L. O. Colbert,
Chief, Section of Field Records.


F. S. Bordun
Chief, Section of Field Work.

Examined and approved:


L. O. Colbert,
Chief, Division of Charts.


G. H. de
Chief, Division of H. & T.

Applied to drawing of Chart 5202 - Mar 1936 - R.M.3 -
" " " 5101 - May 1936 R.M.3.